

# memorandum

DATE: May 8, 1998

REPLY TO  
ATTN OF: Office of Environmental Policy and Assistance:Lin:6-4408

SUBJECT: FINAL RULE FOR COMPLIANCE ASSURANCE MONITORING (CAM)

TO: Distribution

The purpose of this memorandum is to present a summary of the final rule for Compliance Assurance Monitoring (CAM) regulations published by the U.S. EPA in [62 FR 54900](#), October 22, 1997, under the Clean Air Act Amendments.

The CAM rule will apply to DOE facilities that have emission units located at major sources subject to Title V air quality permitting and which use control devices to achieve compliance with emission limits. It requires that these facilities monitor the operation and maintenance of their control equipment to evaluate the performance of their control devices and report if they meet established emission standards. If these facilities find that their control equipment is not working properly, the CAM rule requires them to take action to correct any malfunctions and to report such instances to the appropriate enforcement agency (i.e., State and local environmental agencies). Title V sources will have to modify either their permit application or permit to demonstrate compliance with this rule. Affected facilities should review the CAM requirements and develop a permitting strategy to comply with the rule.

The attached summary highlights principal components of the new CAM requirements that may be pertinent to DOE operations. It by no means addresses all guidance in detail. The EPA working draft, "Technical Guidance Document: Compliance Assurance Monitoring (draft, 1997)", is referenced in the summary and contains additional information related to the CAM regulations. Questions on this rule should be addressed to Paul Lin (202-586-4408, [paul.lin@eh.doe.gov](mailto:paul.lin@eh.doe.gov)) or Ted Koss ([theodore.koss@eh.doe.gov](mailto:theodore.koss@eh.doe.gov)) of this office.

Andrew Wallo III  
Director  
Air, Water and Radiation Division

Attachment

---

## SUMMARY OF THE COMPLIANCE ASSURANCE MONITORING FINAL RULE

### INTRODUCTION

The final Compliance Assurance Rule (CAM) of October 1997 is designed to assure that the owners or operators of larger air pollutant emission sources, which require air pollutant control devices to reduce their emissions to a level that achieves compliance, will maintain compliance with appropriate emission standards. The rule requires owners and operators to monitor the operation and maintenance of their control equipment so that they can evaluate the performance of their control devices and report whether or not their facilities meet established emission standards. The rule obligates owners and operators to meet minimum monitoring requirements that ensure that any air pollution control measures are operated and maintained with good air pollution control practices. That is, if monitoring is conducted properly, facility owners will be able to “assure” state and local agencies, EPA, and the public that they comply with established emissions standards [hence the title of the rule “Compliance Assurance Monitoring (CAM)”].

The following summary briefly addresses the principal components of this new rule, its legislative origin, and some highlights of interest or concern to the DOE. This summary is not intended to be a full “how-to” guidance document. However, complete guidance, if needed, can be obtained from a detailed EPA Technical Guidance Document currently available as a working draft (EPA, 1997). In addition, the rule itself and the preamble published in 62 FR 54900 can be consulted. Appropriate cross references to the final CAM rule in part 64 of 40 CFR are given in this summary.

The final CAM rule was signed by the EPA Administrator on October 3, 1997, published in [62 FR 54900](#), on October 22, 1997 and codified in 40 CFR part 64 as well as in minor conforming amendments to parts 70 and 71. This was the outcome of a four-year legislative history. The CAM regulations represent the response to the statutory mandate by Congress in the Clean Air Act Amendments that contained several provisions directing the EPA to require owners or operators to conduct enhanced monitoring and to make compliance certifications (set forth in Title V--operating permits provisions, and Title VII--enforcement provisions). The first opportunity for public review and comment on this concept was in August 1991 and an “Enhanced Monitoring” Rule was proposed by EPA in October, 1993, and elicited considerable comment. Many state and local agencies, industry representatives and other stakeholders strongly criticized the proposed rule. They believed the proposed rule was overly prescriptive and would have imposed excessive burden on industry to install and operate continuous emission monitoring equipment and on State and local agencies in implementing their operating permit programs. EPA reduced both the breadth and burden of the rulemaking and repropose the now renamed “CAM” rule in September, 1995, and again in August, 1996. EPA’s original 1993 proposed enhanced monitoring rule focused on direct compliance monitoring which in many cases might have required affected facilities to install expensive continuous emission monitoring systems (CEMS) or develop other monitoring directly correlated with emission values. In contrast, the CAM approach builds on regulatory monitoring approaches already in place. The final simplified CAM rule is also designed to be reflective of executive initiative for streamlined government.

#### Legislative History of CAM Rule

---

## MAIN POINTS ABOUT THE CAM RULE

The CAM rule includes a new part 64 to Title 40 of the Code of Federal Regulations (CFR) and to associated revisions to the part 70 monitoring and compliance certification requirements of the permits program. The rule establishes criteria that apply to emission units located at major sources subject to part 70 or part 71 Title V air quality permitting and which use control devices to achieve compliance with emission limits. These criteria define the monitoring, reporting, and record keeping that should be conducted by an emission unit to provide a reasonable assurance of compliance with emission limitations and standards. They address the applicable monitoring approach, the maximum duration of discrepancies from established pollution control indicator ranges chosen to represent acceptable control performance, an obligation to complete corrective actions as indicated by the monitoring results, and how such data are used in an annual compliance certification.

The applicable monitoring approach for any operation depends on the control technology used to meet the applicable emission limit and includes monitoring of operational and control device parameters indicative of pollution control performance and record keeping of work practice and inspection procedures necessary to assure compliance operation. Monitoring is conducted to determine that control measures, once installed or otherwise employed, are properly operated and maintained so that they continue to achieve a level of control that complies with applicable requirements.

The final element of the CAM rule is the concept of a quality improvement plan (QIP). Under the final rule, a QIP may be required by the permitting authority where the owner or operator has failed to satisfy the general duty to properly operate and maintain an emissions unit (including the applicable control device), or the owner or operator has evidence of a failure to comply with an applicable requirement, as determined through part 64 monitoring data and/or other appropriate information (such as inspections), or the owner or operator of a significant emission unit failed to use acceptable procedures in responding to an excursion or exceedance. A QIP is a written plan that outlines the procedures that will be used to evaluate problems that affect the performance of control equipment.

The fundamental CAM requirements are to:

- monitor compliance in a manner that is sufficient to yield data that provide a reasonable assurance of compliance and allow an owner or operator to make an informed certification of compliance, documenting continued operation of the control measures within specified “indicator ranges” of performance (such as emissions, control device parameters, and process parameters) that are designed to provide a reasonable assurance of compliance;
- take necessary corrective actions in response to any excursions from these ranges indicated by the monitoring data, notify the permitting authority of compliance problems;
- report on the results of such monitoring, and
- maintain records of such monitoring.

### CAM Requirements

---

## HOW THE CAM RULE COULD AFFECT A DOE FACILITY

The first thing to do is to establish whether the CAM rule applies to the DOE facility. The CAM rule only applies to facilities that operate emission control devices in accordance with federally enforceable regulations<sup>1</sup> that pertain to the Title V operating permit. Thus the essential criterion is whether the DOE facility is classified as a major source for which a Title V part 70 or 71 permit is required. In addition, an emissions unit at the major source need be subject to an emission limitation or standard; use a control device to achieve compliance; have potential pre-control emissions of at least 100 percent of the major source amount; and must not be exempt otherwise from CAM (as specified in 40 CFR 64.2). Otherwise, the emissions unit at a DOE facility will not be subject to the CAM rule.

Given that a DOE Facility has determined that a CAM plan will be required, detailed regulatory information on such issues as monitoring design criteria, indicators of performance and selection of indicator range, submittal requirements to the permitting authority, operation of approved monitoring can be found in the new part 64 rule, and in particular in sections 64.3, 64.5 and 64.7. In addition, further guidance and examples of CAM plans can be found in “Technical Guidance Document: Compliance Assurance Monitoring” (EPA, 1997).

**Major source** means any stationary source (or any group of stationary sources that are located on one or more contiguous or adjacent properties, and are under common control belonging to a single major industrial grouping that:

- Emits or has the potential to emit, in the aggregate, 10 tons per year (tons/yr) or more of any **hazardous air pollutant** or 25 tons/yr or more of any combination of such hazardous air pollutants. (For radionuclides, "major source" shall have the meaning specified by the EPA Administrator by rule.)
- Directly emits or has the potential to emit, 100 tons/yr or more of any **air pollutant** regulated in the Clean Air Act. (The fugitive emissions of a stationary source shall not be considered in determining whether it is a major stationary source unless the source belongs to certain categories specified in section 302(j) of the Clean Air Act.)

### Major Source

Virtually all Title V sources will have to modify either their permit application or permit to demonstrate compliance with this rule. The final rule will allow states to implement CAM through rulemaking pertaining to categories of sources. Affected facilities should review the requirements in their particular state and EPA region and develop a permitting strategy to comply with the rule.

---

<sup>1</sup>These federal regulations are not limited to EPA regulations, instead they include any regulation that pertains to the Title V operating permit. The CAM rule does not apply to facilities that are subject to EPA regulations issued after 1990. The 1990 Clean Air Act Amendments, incorporated “directly enforceable monitoring” into all emission regulations where in some cases, monitoring is more stringent than the monitoring required under the CAM rule and thus the CAM rule does not apply to facilities that are subject to EPA regulations issued after 1990.

---

## **SPECIFIC TOPICS OF DOE INTEREST**

### ● **Hazardous Air Pollutants**

After receiving substantial public comment on the applicability of proposed CAM rules to hazardous air pollutants, the EPA has significantly modified its approach to hazardous air pollutants under the final rule. Hazardous air pollutant sources are no longer a separate category subject to a different applicability test as proposed in earlier rulemaking--and in particular to the 1993 Enhanced Monitoring proposal which would have applied to all emission limitations or standards established under 40 CFR part 61. Instead, hazardous air pollutant emissions limitations and standards are treated the same as those for criteria air pollutants. Thus, a hazardous air pollutant-specific emissions unit is subject to the CAM rule (40 CFR 64) only if it meets the criteria in 40 CFR 64.2(a) that apply to all pollutants. This approach is consistent with the EPA's overall goal of streamlining part 64. The performance criteria in the final rule also reflect and are generally consistent with other federal monitoring requirements, such as the new NESHAP program general provisions in 40 CFR 63.8(c)(1) and (4)--as well the NSPS program general provisions in 40 CFR 60.13(e).

### ● **40 CFR 61 Subpart H**

DOE has a number of facilities that emit small quantities of radionuclides into the ambient air that are subject to the requirements of 40 CFR 61 Subpart H. Emissions may not exceed those amounts that would cause any member of the public to receive in any year an effective dose equivalent of 10 mrem/yr. The CAM rule does not apply<sup>2</sup> to monitoring of these emissions or to the test procedures outlined in Subpart H (40 CFR 61.93).

### ● **Fugitive Emissions**

The CAM rule applies only to those emissions units for which emissions are vented to a control device. By definition, fugitive emissions are those emissions which cannot reasonably be vented through a stack, chimney, vent, or similar opening. Monitoring of fugitive emissions could be a major potential concern at DOE sites that encompass multi-fugitive emission sources from multiple processes, outdoor piping, valves, storage piles, etc, dispersed over large land areas. However, in the final rule EPA has stated that there is now no need for detailed fugitive emissions monitoring requirements and earlier proposed fugitive emissions provisions have been

---

<sup>2</sup>The CAM rule only applies to major sources obtaining a title V part 70 or 71 permit and whose pre-control device emissions from a pollutant-specific emissions unit of an applicable pollutant are equal or greater than the amount needed for a unit to be classified as a major source (40 CFR 64.2(a)(3)). However, under part 70 or 71, a "major" source threshold has not been defined by the EPA Administrator for radionuclide emissions (40 CFR 70.2). That is, a radionuclide source can not be considered to be a pollutant-specific (here radionuclide-specific) "major" source. Because the CAM rule can only be applied to major sources it does not apply here.

---

dropped. Thus, in the context of the CAM, fugitive emissions are not an issue to DOE.

- **Timetable**

Those DOE facilities that have determined that the submittal and performance of a CAM plan will be required under part 70 or 71 air permitting, need be aware:

- 1) That for large pollutant-specific emissions units (i.e., those that have the potential to emit an amount equal to or greater than 100% of the amount required for a source to be classified as a major source) the facility shall submit the monitoring information required under 40 CFR 64.4 to the permitting authority (normally the host State) as part of an application for an initial permit on or after April 20, 1998. This applies if, by that date, the application either has not been filed; or has not yet been determined to be complete by the permitting authority, or is an application for a significant permit revision. The facility shall conduct the monitoring required upon issuance of a part 70 or 71 permit that includes such monitoring, or by such later date specified in the permit.
- 2) For all other pollutant-specific emissions units the facility shall submit the 40 CFR 64.4 monitoring information as part of an application for a renewal of a part 70 or 71 permit.

- **Reporting and recordkeeping requirements**

When a CAM plan is required the DOE facility need submit (40 CFR 64.9) monitoring reports to the permitting authority and comply with the recordkeeping requirements in accordance with part 70 permitting requirements (40 CFR 70.6(a)(3)(iii)). The DOE facility need maintain records of monitoring data, monitor performance data, corrective actions taken, any written QIP and any activities undertaken to implement a QIP, and other supporting information required to be maintained. The operating permits program requires a facility periodically (at least annually) to report on the compliance status for each requirement in the permit and note any periods of operation outside the established CAM ranges.

## **REFERENCES**

- 62 FR 54900 Compliance Assurance Monitoring. Environmental Protection Agency. October 22, 1997.
- 40 CFR 64 Compliance Assurance Monitoring.
- 40 CFR 70 State Operating Permit Programs. 70.6 Permit content.
- 40 CFR 71 Federal Operating Permits Program. 71.6 Permit content.

---

EPA, 1997      “Technical Guidance Document: Compliance Assurance Monitoring” Working Draft, U.S. Office of Air Quality Planning and Standards, Emission Measurement Center, Research Triangle Park, NC 27711, MRI Project No. 4701-05. October 1997. Note that this document is a working draft. Future release of a final document is planned. A copy of this guidance document may be obtained on the Internet at the URL <http://ttnwww.rtpnc.epa.gov/html/emtic/cam.htm>.